# Predicting the Distribution and Properties of Buried Submarine Topography on Continental Shelves

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## LONG-TERM GOAL

Predict the distribution and properties of features which may be responsible for geoclutter at continental margins of interest.

## OBJECTIVES

The overall objectives of our project are ) to determine the characteristics of channel features that can form when the present continental shelf is subaerially exposed during low sea-level conditions and 2) to determine whether these features would be buried when sea-level returned to its present position and, if so, how deeply. During the brief period of FY00 funding, our objectives have been to obtain the necessary computer facilities and to adapt our existing models to be able to carry out this study.

## APPROACH

Develop numerical simulation models of landscape evolution and shelf transport processes to investigate the development of topography on the continental shelf during sea-level low stands and the burial of that topography during high sea-level conditions.

## WORK COMPLETED

We have acquired local computer facilities to use for model development. Howard's simulation model for landscape formation has been ported to the new system. The model is being modified so that the time step in the model is explicit. Work is in progress on reconfiguring Wiberg's shelf sediment transport model for incorporation into SEDFLUX. We have also been successful in recruiting a post-doctoral associate with strong numerical modeling skills and an interest and experience in the modeling of sedimentary systems. He will be joining us next spring.

We have agreed to host a meeting of a larger group of the Geoclutter participants at the University of Virginia in the spring. The geological modeling group has also made plans to meet during the Fall AGU meeting in December, 2000.

## RELATED PROJECTS

Part of the modeling effort, particularly the incorporation of a shelf model in SEDFLUX, also supports the final phase of STRATAFORM stratigraphic modeling.